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8. A method for forming a semiconductor device having a laminated structure of a dielectric made from a metal oxide and CVD high melting point metal nitride film formed thereover, wherein said dielectric film is directly formed on said dielectric film by introducing a source gas containing said high melting point metal into a chamber in which said substrate is contained, said method comprising:

heating of a substrate onto which said dielectric film is formed to a prescribed temperature in an  $\text{NH}_3$  atmosphere of no greater than 1.0 Torr and no less than 0.1 Torr before the introduction of said source gas containing said high melting point metal.

9. A method for manufacturing a semiconductor device according to claim 8, said method comprising:

a step of heating a substrate to a prescribed temperature; and

a step of maintaining said substrate temperature as a gas non-reactive with respect to tantalum oxide is introduced and the flow thereof is stabilized,

said steps being performed before the introduction of a source gas containing a high melting point metal, and  $\text{NH}_3$  gas being introduced in either said substrate heating step or said flow stabilization step.

10. A method for manufacturing a semiconductor device according to claim 9, said method further comprising:

a step of introducing a source gas containing a high melting point metal, and growing a CVD high melting point metal nitride film after performing said flow stabilization step: and

a step of raising the partial pressure of the  $\text{NH}_3$  gas in the latter half of the CVD film growing step so that annealing is done by the  $\text{NH}_3$  gas.

11. A method for manufacturing a semiconductor device according to claim 1, wherein said method further comprising:

a step, performed before said CVD high melting point metal nitride film

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forming step, of heating a substrate onto which said dielectric film is formed, in said chamber by introducing therein said non-reactive gas; and

a step of forming said high melting point metal nitride film on said dielectric film by introducing a mixture gas comprising said  $\text{NH}_3$  gas, said non-reactive gas the amount of which is identical to or relatively larger than that of said  $\text{NH}_3$  gas and said source gas containing said high melting point metal the amount of which being relatively smaller than those of said  $\text{NH}_3$  gas and said non-reactive gas.

12. A method for forming a semiconductor device according to claim 11, wherein said method further comprising a step of a gas purging operation in an inside of said chamber by supplying said  $\text{NH}_3$  gas and said non-reactive gas into said chamber with stopping a supply of said source gas containing said high melting point metal thereinto.

Substa 13. A method for forming a semiconductor device according to claim 1, wherein said dielectric film is a tantalum oxide ( $\text{Ta}_2\text{O}_5$ ) film.

14. A method for forming a semiconductor device according to claim 1, wherein said substrate is heated to a temperature of at least  $400^\circ\text{C}$  and no greater than  $700^\circ\text{C}$ .

15. A method for forming a semiconductor device according to claim 1, wherein said non-reactive gas is one gas selected from a rarified gas including nitrogen, argon, hydrogen gas, or a mixture of these gases.

16. A method for forming a semiconductor device according to claim 1, wherein said high melting point metal nitride film is TiN film.

17. A method for forming a semiconductor device according to claim 16, wherein said source gas containing titanium as said high melting point metal, is a gas selected from the group consisting of titanium tetrachloride ( $\text{TiCl}_4$ ), tetrakis dimethyl amino titanium (TDMAT), tetrakis diethyl amino titanium (TDEAT) is used as the source gas containing titanium.

18. A method for forming a semiconductor device according to claim 1,

wherein said high melting point metal nitride film is a WN film, and wherein WF<sub>6</sub> gas is introduced as a source gas containing tungsten.

19. A method for manufacturing a semiconductor device according to claim 1, wherein said semiconductor device has a capacitive element, a dielectric film of which is a capacitive insulation film, a CVD high melting point metal nitride film serving as a protective film disposed between said capacitive insulation film and said capacitive element.

20. A method for manufacturing a semiconductor device according to claim 1, wherein said semiconductor device has a MOSFET, the gate insulation film of which is a dielectric film, and wherein said CVD high melting point metal nitride layer is the lowermost layer of the laminated gate electrode layer formed on said gate insulation film.

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